KANSAS DEPARTMENT OF AGRICULTURE

SOLOMON RIVER BASIN NEWSLETTER

April 2009

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Next Working Group Meeting

Solomon Working Group 10:30 a.m. May 5, 2009 Division of Water Resources Stockton field office

Welcome Aboard!

David Means has joined the Enhancement Water Management Team in the Stockton Field Office.

His focus will be on the Ogallala-High Plains and Solomon Basin areas.

Solomon Working Group Update: Upper Solomon Forks Model

by Darci Paull

After a seven-month hiatus, the Solomon Working Group met February 23, 2009, in Stockton. During the previous meeting in July, the working group decided on six management scenarios:

1. Continued pumping at status quo
2. Ogallala vs. alluvial pumping
    - Turn off all alluvial pumping
    - Turn off all Ogallala pumping
3. Turn off all pumping
4. Lower the evapotranspiration (50%)
5. Turn off pumping in marginal soils
6. Eliminate anomalously high precipitation years

During the February meeting, S.S. Papadopulos and Associates presented model results of these six options for the Upper North Fork subbasin, including Bow Creek. The five scenarios were compared to the status quo to determine which would result in greater water savings. The 50 percent reduction of evapotranspiration had the best water savings overall. Unfortunately, the working group acknowledged that this management scenario may be unfeasible.

The U.S. Bureau of Reclamation specifically asked to see the scenario to eliminate anomalously high precipitation years. The model showed that without the high precipitation years, the recharge drops from 22,040 AF to 18,454 AF. Once S.S. Papadopulos and Associates finishes the Upper South Fork subbasin model runs, we will provide a similar presentation as the Upper North on our website for the working group members to review individually.

The Solomon Working Group is tentatively planning to meet at 10:30 a.m. May 5, 2009, at Division of Water Resources' Stockton field office. The agenda will include further discussion on the model runs and management options for the subbasin.

For more information regarding the Solomon Working Group. or to review prior meeting materials, including results from the model runs, please visit our website at www.ksda.gov/subbasin/

Solomon Basin Reservoir Levels and Irrigation District Operations for 2009

by Scott Voss

Calendar year 2008 provided the Solomon basin a spring and summer unlike those of most recent years. There was plenty of rainfall, which led to surface runoff that quickly raised reservoir water levels throughout the basin. Webster Reservoir rose just over 21.5 feet in elevation from this time last year to its current level just above conservation pool. Kirwin Reservoir came up just under 20 feet from last year, and it is within a foot of reaching the top of the conservation pool.

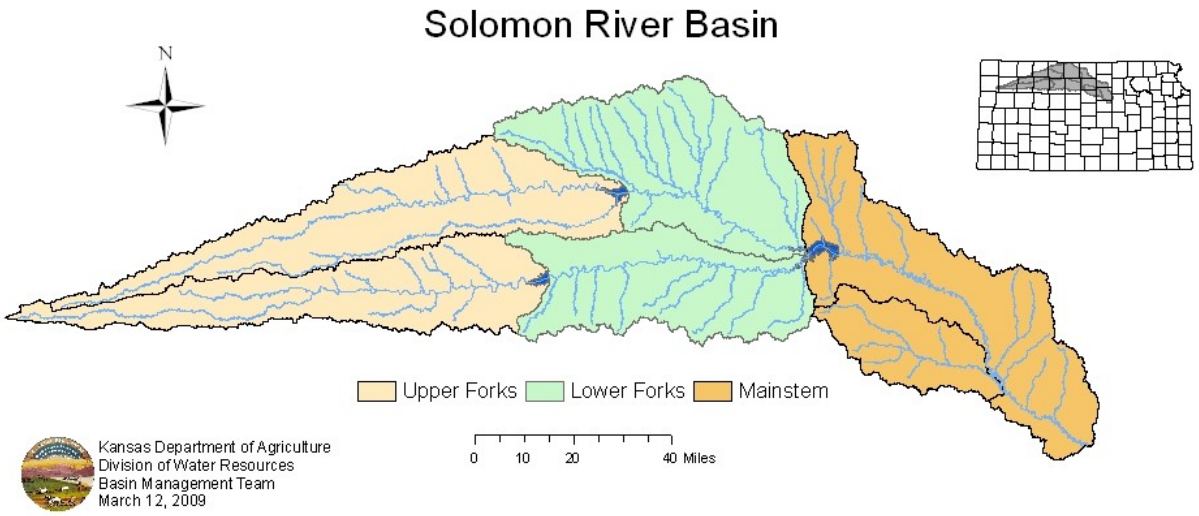
Both reservoirs are still rising and agreements are being sought with the Bureau of Reclamation and Army Corps of Engineers to hold the additional water above conservation level as much as 5 percent into the flood pool. This option is more likely for Webster Reservoir, but it could come into play at Kirwin if sufficient spring rains raise the reservoir levels above the conservation pool. Such an agreement would lessen the impact of outflows and water level decline associated with irrigation district releases. Holding water 5 percent into the flood pool at Webster would account for an additional 9,168 acre-feet, allowing the Webster district to deliver six to eight weeks of water before reaching the top of conservation pool again.

Last year was the fourth year in a row the Webster Irrigation District did not call for a water delivery because the supply in Webster Reservoir was not adequate. Kirwin Irrigation District also has struggled with either a lack of or limited supply of water for delivery in recent years. However, with the reservoirs filling and a full water supply available, the districts' delivery supply will not be an issue this spring.
Both Webster and Kirwin irrigation districts are seeking a nine-inch delivery this irrigation season. Webster district's decision to request only a nine-inch delivery is due to a number of irrigated acres being planted to wheat. The Kirwin district's board believe a nine-inch delivery will be adequate, but that may change if there is very little rainfall this year.

Solomon Field Summaries Available Online

by Tara Lanzrath

The Subbasin Water Resource Management Program compiles annual summaries of hydrologic data for each subbasin within a project area. The Solomon River Basin project area is divided into three sections: Upper Forks, Lower Forks and Mainstem. A summary for each section is created annually, and the 2008 summary is now available. Data include United States geological streamflow, National Climatic Data Center precipitation, water levels and water use. They also include general background information on the geographic area.



In 2008, the Solomon River Basin as a whole experienced above-average precipitation with more than 30 inches of rain in each of the three subbasins. This improved streamflow for all subbasins and, in the Lower Solomon, the Portis and Osborne gages had streamflows higher than 100 cfs at the end of 2008. In addition, the Niles gage on the mainstem stayed above minimum desirable streamflow levels for most of 2008. In the Upper Solomon, streamflows were also higher at the gage above Webster Reservoir, which helped raise surface water levels. With the above-average precipitation, some areas did see an increase in groundwater levels in 2009. However, other areas still experienced declines.

For more detailed information on the Solomon River Basin, please visit our website at www.ksda.gov/subbasin/ and select Solomon River Basin and Field Summaries.

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Visit www.ksda.gov/subbasin/mailing_list/ to sign up for other online newsletters!

Subbasin Water Resource Management Program Updates Website

The Subbasin Water Resource Management Program updated its website with new content and updated project areas.

Current project areas include the Upper Arkansas River Subbasin, Middle Arkansas River Subbasin, Rattlesnake Creek Subbasin, Solomon River Basin, Pawnee River Subbasin, Ogallala aquifer and Ozark Plateau aquifers.

New content includes streamflow monitoring data under the Pawnee-Buckner-Sawlog subbasin, Solomon and Middle Arkansas and the 2008 Field Summaries.

We are always looking for ways to improve our website to make it more useful. Please feel free to send an email through the "contact information" section, or submit your feedback on the comment form in the top right-hand corner of the website.

Division of Water Resources Publishes Newsletter

The Division of Water Resources' electronic newsletter, DWR Currents, is distributed quarterly and focuses on providing useful, timely information related to Kansas' water resources. You can subscribe to receive the newsletter by email, or you can view current and past newsletters online at www.ksda.gov/dwr/.